



## CUTANEOUS MANIFESTATIONS OF INTERNAL MALIGNANCIES – A STUDY OF 217 CASES

### Oncology

**Dr. S. Srinivasa Ravi**

D.DLO, MD (DVL), Assistant Professor in DVL, Department of DVL, Rangaraya Medical College, Kakinada.

**Dr. Anusha Pilla**

DDVL, Senior Resident in DVL, Andhra Medical College, Visakhapatnam.

### ABSTRACT

**BACKGROUND :** Skin manifestations act as markers for internal malignancy. There may be direct and indirect involvement of skin in various malignancies. Cutaneous manifestations may act as early markers for internal malignancy and various skin manifestations both specific and non specific were seen during the course of malignancy.

**AIM :** The main purpose of this study is to know the incidence and clinical pattern of skin changes both specific and non specific seen in various internal malignancies.

**MATERIALS AND METHODS :** It is an open prospective and observational study. All confirmed malignancy cases attending to the Out patient departments of Radiotherapy and DVL at Government General Hospital, Kakinada were recorded over a period of one year from MAY 2005 to MAY 2006. Total 217 cases of various malignancies were seen during the above period. These cases were clinically evaluated for skin manifestations and the demographic data was noted. These cases were thoroughly clinically examined for various skin manifestations. Relevant haematological, biochemical investigations and skin biopsies were taken in some cases.

**RESULTS :** Out of 217 cases, skin changes were seen in 74 out of 217 cases and the incidence is 34.1 %. Specific skin changes were observed in 10 cases ( 4.6%) and non specific lesions were observed in 64 cases ( 29.5%)

The specific manifestations were Cutaneous metastasis (primary being Lymphomas) in the form of nodules in three cases, Acanthosis nigricans in one case of Adeno carcinoma of stomach, Paraneoplastic pemphigus (primary malignancy being Lymphoma) in one case, Ichthyosis acquisita in one case of Lymphoma, one case of Paget's disease of breast associated with intraductal carcinoma of breast, one case of Neutrophilic dermatosis with Lymphoma, one case of Xeroderma pigmentosum with Acute myeloid leukemia and one case of Pyoderma gangrenosum with Rectal carcinoma. The non specific changes were Generalised pruritus, Herpes zoster, Diffuse alopecia, Vitiligo, Tinea versicolor, Ichthyosis vulgaris etc.

**CONCLUSION :** In this study, the following observations were made. Cutaneous secondaries were the most common cutaneous manifestation with internal malignancies. Non Hodgkin's lymphoma is the most common internal malignancy associated with cutaneous manifestations.

### KEYWORDS

Cutaneous manifestations, Internal malignancies.

### INTRODUCTION :

Cutaneous findings often reflect the presence and course of an internal disease. In some cases, these cutaneous lesions act as early markers for early diagnosis and prompt treatment of underlying malignancy. The main purpose of this study is to know incidence and clinical pattern of skin changes both specific and non specific seen in various internal malignancies.

### MATERIALS AND METHODS :

Our study is an open observational and prospective study carried out in the department of Radiotherapy and DVL in Government General Hospital Kakinada from MAY 2005 to MAY 2006. 217 patients of both sexes, all age groups suffering from various malignancies were included in the study. A detailed clinical history, demographic data of patients, duration of the malignancies and skin changes and other details like the type of malignancy were recorded. A thorough cutaneous examination were carried out to record various skin manifestations. Relevant haematological, biochemical investigations and skin biopsies were done depending upon the clinical condition.

### RESULTS :

Patient's demographic data is given in TABLE 1 and 2.

Out of 217 patients, 116 were males and 101 were females. 154 Patients were above the age of 31 years forming the major portion of the study group.

The various malignancies studied were mentioned in TABLE 3.

The commonest malignancies in males were lymphomas (21/116) bronchogenic carcinomas (16/116) followed by oropharyngeal carcinomas (8/116). The commonest malignancies in females were carcinoma cervix (32/101) followed by carcinoma breast (27/101). Rarest malignancies in females were uterine carcinomas (2/101). Lymphomas occupied the major portion with 36 cases out of 217 in the various malignancies studied in the group. Hepatic & uterine malignancies were the rarest of the study group each with 2 cases out of 217.

The details of various cutaneous manifestations specific and non

specific were mentioned in TABLES 4 and 5. Various cutaneous manifestations were given in FIGURES 1 and 2.

Specific cutaneous lesions were seen in only 10 cases out of 217. Non specific lesions were more common and in 64 out of 217 malignancy cases, non specific changes were seen. Cutaneous secondaries were the commonest specific cutaneous lesions whereas generalized pruritus were the commonest non specific symptoms observed in our series.

### DISCUSSION

Cutaneous manifestations of cancer can present with a variety of clinical findings that may reflect direct involvement of malignant cells, an epiphenomenon of a distant malignancy, or in the context of a familial cancer syndrome.. Cutaneous lesions are seen in all stages of internal malignancies. In some cases, they act as early cutaneous markers to detect underlying malignancy. Various specific lesions like acanthosis nigricans, bazex syndrome, pyoderma gangrenosum etc are seen. In addition, non specific lesions like vitiligo, herpes zoster, pruritus are also seen.

In a study done by Rajagopal R et al<sup>1</sup> in 300 confirmed cases of internal malignancy, skin changes were seen in 27.3%. In our study, skin changes were seen in 74 out of 217 cases and the incidence is 34.1 %. The common malignancy in which cutaneous manifestation seen were non Hodgkin's lymphomas. The most common cutaneous manifestation associated with them were cutaneous secondaries. A Cutaneous metastases can arise at any age. However in keeping with the increased incidence of malignant disease in later life most cutaneous metastases occurred during or after the 5th decade as stated by Rosen. T et al<sup>2</sup>. Our study differed with this study as most of our cases of cutaneous metastases were below 45 years of age. In a study of 724 patients in whom primary and metastatic sites of tumors were analysed, Brownstein and Hedwig<sup>3</sup> found that carcinoma of lung, ovary and kidney frequently revealed their presence through cutaneous metastasis. Skin metastases were reported in different studies by Beerman.H<sup>4</sup> & Renigold.M<sup>5</sup> in 3% - 4% of cases. In the our study of 217 cases, the incidence of cutaneous metastases was 1.4% (3 cases) and the primaries being lymphomas. Curth and Aschner<sup>6</sup> pointed out an interesting feature of patients with both benign and malignant acanthosis nigricans : " There is an apparently high

incidence of cancer, predominantly gastric carcinoma in family members". In our study, the incidence of acanthosis nigricans is 0.5% (one case) being associated with adenocarcinoma of stomach. This finding correlates with the study of Rigel DS, Jacobs M I <sup>7</sup>. Hyperpigmented velvety lesions involving neck and axillae developed over a period of 5 months in this patient. Cormia <sup>8</sup> believes that the itching of carcinoma occurs primarily on the extremities and trunk and skips from site to site. In our study, the incidence of pruritus is 10% (22 cases). Ichthyosis appearing denovo in adults is another relatively specific sign of lymphoma - this statement was given by Flint et al <sup>9</sup>. Acquired Ichthyosis found in our study in hodgkins lymphoma supports the study made by feind-koopman AG et al <sup>10</sup>. Fine scales affecting trunk limbs sparing flexures developed over a period of 6 months in this patient and the incidence is 6.9% (15 cases).

In our study, out of 217, specific changes were seen in 10 cases (4.6%) and non specific changes were seen in 64 cases (29.5%). The specific changes observed were Cutaneous secondaries in the form of nodules in three cases of lymphoma. In one case of Acute myeloid leukemia, xeroderma pigmentosum was seen. Xeroderma pigmentosum is known to develop malignancies such as medulloblastoma and astrocytoma of brain, bronchogenic carcinoma etc. The other specific changes were one case of acanthosis nigricans noted in a case of adenocarcinoma of stomach, one case of lymphoma having extensive bullous lesions and mucosal erosions was diagnosed as paraneoplastic pemphigus according to Anhalt's original diagnostic criteria. Paraneoplastic pemphigus is commonly associated with lymphoproliferative neoplasms. One case of lymphoma showed dry scaly lesions all over the body and diagnosed as Ichthyosis acquisita, One case of lymphoma presented with multiple well defined plaques with irregular borders showing appearance of relief of a mountain range typical of sweet syndrome. Sweet syndrome is commonly associated with Acute myelogenous leukemia and solid tumors. A case of paget's disease of breast presented with infiltrating duct carcinoma of breast and one case of rectal carcinoma showed extensive non healing necrotic ulceration over the right leg, histopathology suggestive of pyoderma gangrenosum. In the present study patients with Non specific skin changes were 64. Pruritus was observed in the maximum number of 22 patients. Ichthyosis vulgaris was observed in 15 patients. Idiopathic Guttate Hypomelanosis was observed in 12 patients, Tinea Versicolor in 9 patients, Herpes zoster in 3 cases, 2 cases of diffuse alopecia of scalp and a case each of Vitiligo and neurofibroma.

**CONCLUSION:**

Cutaneous lesions of different types are observed in internal malignancies. Some of these lesions may act as cutaneous markers to help a physician to detect underlying malignancy at early stages. Some lesions may develop during the course of the malignancy and other lesions may be due to the adverse effects of anti malignant drugs. Therefore knowledge, awareness and search for skin manifestations are essential for early diagnosis and appropriate management of malignancies.

**TABLE 1**

AGE	NUMBER
1-10YEARS	6
11-20 YEARS	14
21-30 YEARS	43
31-40 YEARS	89
41-50 YEARS	50
51-60 YEARS	8
61-70 YEARS	7
TOTAL	217

**TABLE 2**

No. of Patients	Male	Female	Total	Ratio
No. of cases studied	116	101	217	1.14:1

**TABLE 3**

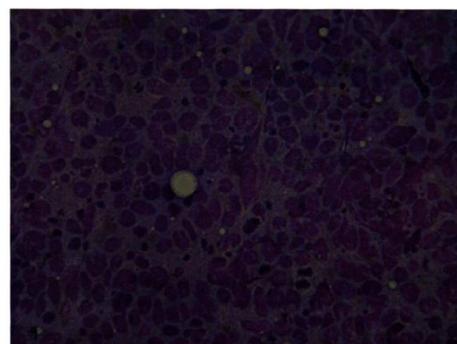
Malignancy	No.of cases
Lymphomas	36
Carcinoma cervix	32
Carcinoma Breast	27
Leukaemias	25
Bronchogenic Carcinoma	21
Gastric Carcinoma	20

Colorectal Carcinoma	14
Oropharyngeal Carcinoma	13
Carcinoma Oesphagus	9
Carcinoma Thyroid	5
Brain Tumors	4
Renal Carcinoma	4
Ovarian Carcinoma	3
Hepatic Carcinoma	2
Uterine Carcinoma	2
TOTAL	217

**TABLE 4 – SPECIFIC LESIONS**

Sl. No.	Lesion	Number	Associated Malignancy
1	Cutaneous Secondaries	3	Lymphomas
2	Xeroderma Pigmentosum	1	Acute Myeloid Leukaemia
3	Infiltrating nodules over nipple	1	Infiltrating duct Carcinoma of breast
4	Acanthosis Nigricans	1	Adeno Carcinoma of Stomach
5	Paraneoplastic Pemphigus	1	Lymphoma
6	Ichthyosis Acquisita	1	Lymphoma
7	Neutrophilic dermatosis presenting as multiple erythematous plaques	1	Lymphoma
8	Pyoderma gangrenosum presenting as a large necrotic ulcer	1	Rectal Carcinoma.

**CUTANEOUS SECONDARIES - 1**



**LARGE CELL ANAPLASTIC LYMPHOMA**

**TABLE 5 – NON SPECIFIC LESIONS**

Lesions	No.
Pruritus	22
Ichthyosis Vulgaris	15
Idiopathic guttate hypomelanosis	12
Tinea versicolor	9
Herpes Zoster	3
Diffuse Alopecia	2
Vitiligo	1
Neurofibroma	1

**IDIOPATHIC GUTTATE HYPO MELANOSIS****ICHTHYOSIS VULGARIS****REFERENCES**

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